

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 5-20-2004
 Art Unit: 1752 Phone Number: 2-333 Serial Number: 10/628,348
 Mail Box and Bldg/Room Location: 9066 Results Format Preferred (circle) PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or unity of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Photosensitive Composition and Acid Generator
 Inventors (please provide full names): Kodama, Kunihiko

Earliest Priority Filing Date: 9-24-03

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

— Please search for a compound of the formula (I) in attached Claim 1.



STAFF USE ONLY

Searcher <u>EL</u>	NA Sequence (F)	STN <u>359.89</u>
Searcher Phase #	AA Sequence (F)	Dating <u>(initials)</u>
Searcher Location	Structure (F) <u>(initials)</u>	Quoted (F)
Date Searcher Picked Up	Bibliographic <u>(initials)</u>	De Link
Date Completed <u>5-23-04</u>	Litigation <u>(initials)</u>	Links/News
Searcher Prep & Review Time <u>5</u>	Fulltext	Sequence System
Classen/Prep Name	Patent Family	WWW/Internet
Online Time <u>75</u>	Other	Other (specify)

=> file reg

FILE 'REGISTRY' ENTERED AT 15:25:46 ON 23 MAY 2004
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=> display history full 11-

L1 FILE 'LREGISTRY' ENTERED AT 14:47:29 ON 23 MAY 2004
STR

L2 FILE 'REGISTRY' ENTERED AT 14:52:27 ON 23 MAY 2004
3 SEA SSS SAM L1

L3 FILE 'LREGISTRY' ENTERED AT 14:55:12 ON 23 MAY 2004
STR L1

L4 FILE 'REGISTRY' ENTERED AT 15:08:29 ON 23 MAY 2004
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L7 50 SEA SSS SAM L5 AND L6
L8 SCR 1151 OR 1139
L9 50 SEA SSS SAM L5 AND L6 AND L8
L10 4891 SEA SSS FUL L5 AND L6 AND L8
SAV L10 LEE348/A
L11 14 SEA SUB=L10 SSS SAM L3
L12 248 SEA SUB=L10 SSS FUL L3
SAV L12 LEE348A/A

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CREAT? OR FORM## OR FORMING# OR FORMAT? OR MAKE# OR
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PREP#)/BI,AB

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L16 88411 SEA ((PHOTO OR LIGHT OR PHOTOLY?)(2A)(RX# OR RXN# OR
REACT? OR SENSITI? OR POLYM? OR CURE# OR CURING# OR
CURAB? OR CROSSLINK? OR CROSS(W)LINK? OR CAT# OR
CATALY?))/BI,AB
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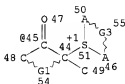
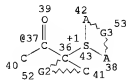
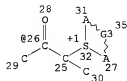
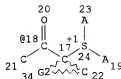
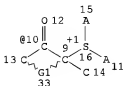
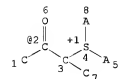
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 L18 157516 SEA (PHOTORX## OR PHOTOREACT? OR PHOTOSENS? OR PHOTOPOLYM
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 L21 102 SEA L12
 L22 5 SEA L21 AND L14
 L23 11 SEA L21 AND L15
 L24 4 SEA L21 AND L20
 L25 11 SEA L21 AND (L16 OR L17 OR L18)
 L26 148442 SEA RESIST OR RESISTS OR PHOTORESIST? OR MASK? OR
 PHOTOMASK?
 L27 8 SEA L21 AND L26
 L28 20 SEA L22 OR L23 OR L24 OR L25 OR L27
 L29 82 SEA L21 NOT L28
 L30 82 SEA L29 AND (1907-2003/PY OR 1907-2003/PRY)
 L31 81 SEA L29 AND (1907-2002/PY OR 1907-2002/PRY)
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FILE 'REGISTRY' ENTERED AT 15:25:46 ON 23 MAY 2004

=> d l12 que stat
 L3 STR



G4 57

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REP G2=(1-4) C
REP G3=(0-3) A
VAR G4=2/10/18/26/37/45
NODE ATTRIBUTES:
CHARGE IS E+1 AT 4
CHARGE IS E+1 AT 16
CHARGE IS E+1 AT 24
CHARGE IS E+1 AT 32
CHARGE IS E+1 AT 43
CHARGE IS E+1 AT 51
NSPEC IS RC AT 5
NSPEC IS RC AT 8
NSPEC IS RC AT 11
NSPEC IS RC AT 15
NSPEC IS RC AT 19
NSPEC IS RC AT 23
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

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GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 56

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STEREO ATTRIBUTES: NONE
L5 STR

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1 S +1

NODE ATTRIBUTES:

CHARGE IS E+1 AT 1
NSPEC IS RC AT 1
DEFAULT MLEVEL IS ATOM
DEFAULT ELEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 1

STEREO ATTRIBUTES: NONE

L6 SCR 2040
L8 SCR 1151 OR 1139
L10 4891 SEA FILE=REGISTRY SSS FUL L5 AND L6 AND L8
L12 248 SEA FILE=REGISTRY SUB=L10 SSS FUL L3

100.0% PROCESSED 4891 ITERATIONS
SEARCH TIME: 00.00.01

248 ANSWERS

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FILE 'HCA' ENTERED AT 15:26:03 ON 23 MAY 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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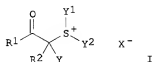
L28 ANSWER 1 OF 20 HCA COPYRIGHT 2004 ACS on STN

140:329525 **Photosensitive composition and
acid generator.** Kodama, Kunihiko (Fuji Photo Film
Co., Ltd., Japan). Eur. Pat. Appl. EP 1406122 A2 20040407, 83 pp.
DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI,
LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,
EE, HU, SK. (English). CODEN: EPXXDW. APPLICATION: EP 2003-21631
20030925. PRIORITY: JP 2002-279273 20020925.

GI



applicant.



AB A photosensitive compn. comprises an acid generator of the formula I (R1 = alkyl; R2 = H, alkyl, aryl; Y = alkyl; Y1, Y2 = alkyl, aryl, aralkyl, hetero atom-contg. arom.; R1 and R2 may be bonded to each other to form a ring; R2 and Y may be bonded to each other to form a ring; Y1 and Y2 may be bonded to each other to form a ring; two or more structures of the general formula I may be bonded to each other at any position of R1, R2 or Y, or Y1 or Y2 via a connecting group; X = non-nucleophilic anion)., an alk. developer-sol. resin, an acid crosslinking agent, a basic compd., and a surfactant. The object of the present invention is to provide an acid generator that has a high transparency against rays of not longer than 220 nm, has an enhanced photodegrdn. ability as compared with conventionally known acid generators, thereby revealing high sensitivity, and providing a good resist profile. The photosensitive compn. of the present invention has excellent sensitivity and pattern profile.

IT 677351-28-9P
(acid generator; photosensitive compn. and acid generator)

RN 677351-28-9 HCA
CN Thiophenium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefluorobutanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-27-8
CMF C11 H21 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}O_3S-(CF_2)_3-CF_3$

IT 677351-29-0 677351-30-3 677351-31-4
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 677351-43-8 677351-45-0 677351-47-2
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 677351-58-5 677351-60-9 677351-62-1
 677351-64-3

(acid generator; photosensitive
 compn. and acid generator)

RN 677351-29-0 HCA

CN Thiophenium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with
 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonic
 acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-27-8

CMF C11 H21 O S



CM 2

CRN 45298-90-6

CMF C8 F17 O3 S

 $^{-}O_3S-(CF_2)_7-CF_3$

RN 677351-30-3 HCA
 CN Thiophenium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-27-8

CMF C11 H21 O S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



RN 677351-31-4 HCA
 CN Thiophenium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-[(nonafluorobutyl)sulfonyl]-1-butanefulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-27-8

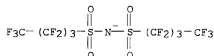
CMF C11 H21 O S



CM 2

CRN 191101-38-9

CMF C8 F18 N O4 S2



RN 677351-32-5 HCA

CN Thiophenium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with tris[(trifluoromethyl)sulfonyl]methane (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-27-8

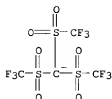
CMF C11 H21 O S



CM 2

CRN 130447-45-9

CMF C4 F9 O6 S3



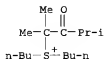
RN 677351-34-7 HCA

CN Sulfonium, dibutyl(1,1,3-trimethyl-2-oxobutyl)-, salt with
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 INDEX NAME)

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CRN 677351-33-6

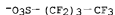
CMF C15 H31 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



RN 677351-36-9 HCA

CN Thiophenium, 1-(1,1-diethyl-2-oxopentyl)tetrahydro-, salt with
 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA
 INDEX NAME)

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CRN 677351-35-8

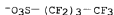
CMF C13 H25 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



RN 677351-37-0 HCA

CN Thiophenium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with pentafluorobenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-27-8

CMF C11 H21 O S



CM 2

CRN 46377-88-2

CMF C6 F5 O3 S



RN 677351-39-2 HCA
 CN Sulfonium, (1,1-dimethyl-2-oxopentyl)dimethyl-, salt with
 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA
 INDEX NAME)

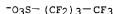
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CRN 677351-38-1
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CM 2

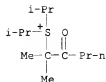
CRN 45187-15-3
 CMF C4 F9 O3 S



RN 677351-41-6 HCA
 CN Sulfonium, (1,1-dimethyl-2-oxopentyl)bis(1-methylethyl)-, salt with
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 INDEX NAME)

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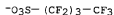
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 CMF C13 H27 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



RN 677351-43-8 HCA

CN Thiophenium, 1-(1-acetylcyclopropyl)tetrahydro-, salt with
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INDEX NAME)

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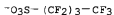
CMF C9 H15 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



RN 677351-45-0 HCA

CN Thiophenium, 1-(1-acetylcyclohexyl)tetrahydro-, salt with

1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-44-9

CMF C12 H21 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

RN 677351-47-2 HCA

CN Thiophenium, 1-(1,3-dimethyl-2-oxocyclohexyl)tetrahydro-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-46-1

CMF C12 H21 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



RN 677351-48-3 HCA

CN Thiophenium, 1-(1,3-dimethyl-2-oxocyclohexyl)tetrahydro-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

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CRN 677351-46-1

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CM 2

CRN 37181-39-8

CMF C F3 O3 S



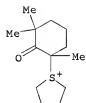
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CN Thiophenium, tetrahydro-1-(1,3,3-trimethyl-2-oxocyclohexyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 677351-49-4

CMF C13 H23 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}O_3S-(CF_2)_3-CF_3$

RN 677351-52-9 HCA

CN Thiophenium, tetrahydro-1-(1,1,3,3-tetramethyl-2-oxobutyl)-, salt
with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI)
(CA INDEX NAME)

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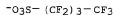
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CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



RN 677351-54-1 HCA

CN Thiophenium, 1-(1,1-dimethyl-2-oxopropyl)tetrahydro-, salt with
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INDEX NAME)

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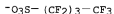
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CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



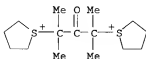
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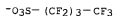
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CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



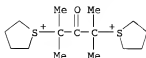
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CN INDEX NAME NOT YET ASSIGNED

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CM 2

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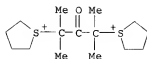
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CN INDEX NAME NOT YET ASSIGNED

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CMF C15 H28 O S2



CM 2

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CMF C8 F17 O3 S

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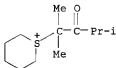
RN 677351-60-9 HCA

CN 2H-Thiopyranium, tetrahydro-1-(1,1,3-trimethyl-2-oxobutyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

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CRN 677351-59-6

CMF C12 H23 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

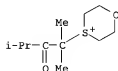
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RN 677351-62-1 HCA

CN 1,4-Oxathianium, 4-(1,1,3-trimethyl-2-oxobutyl)-, salt with 3,5-bis(trifluoromethyl)benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

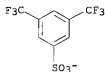
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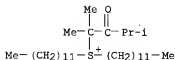
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RN 677351-64-3 HCA
 CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 677351-63-2
 CMF C31 H63 O S



CM 2

CRN 55077-28-6
 CMF C10 H15 O4 S



IC ICM G03F007-004
ICS G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **photosensitive compn acid generator photoresist photolithog**

IT Polysiloxanes, uses
(KP-341, Troysol S-366; **photosensitive compn. and acid generator**)

IT Photolithography
Photoresists
(**photosensitive compn. and acid generator**)

IT 677351-28-9P
(**acid generator; photosensitive compn. and acid generator**)

IT 66003-78-9 133710-62-0 135133-12-9 138529-81-4 144317-44-2
177034-80-9 220475-58-1 227199-92-0 241806-75-7 258341-98-9
258872-05-8 261917-44-6 284474-28-8 301153-77-5 301664-71-1
301664-72-2 347193-28-6 365971-84-2 389859-76-1 391232-40-9
398141-18-9 470482-89-4 474510-73-1 610301-07-0
677351-29-0 677351-30-3 677351-31-4
677351-32-5 677351-34-7 677351-36-9
677351-37-0 677351-39-2 677351-41-6
677351-43-8 677351-45-0 677351-47-2
677351-48-3 677351-50-7 677351-52-9
677351-54-1 677351-56-3 677351-57-4
677351-58-5 677351-60-9 677351-62-1
677351-64-3 677351-65-4 677351-66-5
(**acid generator; photosensitive compn. and acid generator**)

IT 141-07-1 3089-11-0 4356-60-9 161679-94-3 162846-57-3
162846-59-5 185502-14-1
(**crosslinking agent; photosensitive compn. and acid generator**)

IT 143336-94-1P 250378-10-0P 289623-64-9P 312620-54-5P
359635-35-1P 370102-83-3P 370866-39-0P 391232-36-3P
391613-77-7P 398140-38-0P 398140-43-7P 398140-45-9P
398140-57-3P 398140-59-5P 398140-68-6P 398140-69-7P

398140-77-7P	398140-80-2P	405509-19-5P	406702-00-9P
430437-18-6P	459418-30-5P	460754-13-6P	482609-97-2P
508210-04-6P	515876-73-0P	521303-15-1P	521303-16-2P
607710-65-6P	607710-66-7P	607710-67-8P	607710-68-9P
607710-69-0P	607710-70-3P	607710-71-4P	607710-72-5P
607710-73-6P	607710-77-0P	610300-97-5P	610300-98-6P
610301-00-3P	610301-01-4P	610301-03-6P	610301-04-7P
610301-05-8P	615278-35-8P	654076-36-5P	676515-93-8P
677351-18-7P	677351-19-8P	677351-20-1P	677351-22-3P
677351-24-5P			

(photosensitive compn. and acid
generator)

IT	24979-69-9	24979-70-2	129674-22-2	137462-24-9, Megafac F176
	158593-28-3	177034-75-2	185405-14-5	200808-68-0 216679-67-3,
	Megafac R08	321164-59-4	325143-38-2	345212-27-3 372968-15-5
	610301-50-3	677351-26-7		

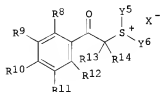
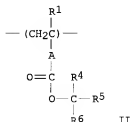
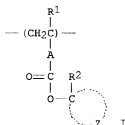
(photosensitive compn. and acid
generator)

IT	29420-49-3, Potassium nonafluorobutanesulfonate	55339-64-5
	(prepn. of photoacid generator)	

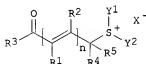
L28 ANSWER 2 OF 20 HCA COPYRIGHT 2004 ACS on STN

140:311995 Positive resist composition and pattern formation
method. Nishiyama, Fumiyuki; Sato, Kenichiro; Kodama, Kunihiro
(Fuji Photo Film Co., Ltd., Japan). U.S. Pat. Appl. Publ. US
2004063827 A1 20040401, 56 pp. (English). CODEN: USXXCO.
APPLICATION: US 2003-669603 (20030925) PRIORITY: JP 2002-287252
20020930; JP 2002-287393 20020930.

GI



III



IV

AB A pos. resist compn. comprising: (A) a resin having alicyclic hydrocarbon groups in side chains, contg. repeating units of general formulas I and II (R_1 = H, alkyl; A = linkage group, R_2 = C1-4-alkyl; Z = group forming an alicyclic hydrocarbon group together with the carbon atom; R_4 - R_6 = hydrocarbon group, alicyclic hydrocarbon) which increases the soly. in an alkali developing soln. by the action of an acid; and (B) a particular sulfonium compd. having a general structures of formulas III and IV (R_1 - R_3 = H, alkyl, alkenyl, aryl, alkoxy; R_4 , R_5 = H, cyano, alkyl, aryl, alkoxy; Y_1 , Y_2 = alkyl, aryl, aralkyl, heteroatom-contg. arom. group; n = 1-4; R_8 - R_{12} = H, nitro, halogen, alkyl, alkoxy, alkyloxycarbonyl, aryl, acylamino, with the proviso that at least two of R_8 - R_{12} may be bonded with each other to form a ring; R_{13} = H, cyano, alkyl, aryl; R_{14} = alkyl, aryl; Y_5 , Y_6 = alkyl, aryl, aralkyl, heteroatom-contg. arom. group, Y_5 and Y_6 may be bonded with each other to form a ring; X^- = non-nucleophilic anion) which is capable of generating an acid upon irradiation with an actinic ray or radiation. The object of the present invention is to provide a pos. resist compn. that is used suitably in micro-photofabrication utilizing far UV light, notably ArF excimer laser beam, and offers excellent line edge roughness performance and excellent pattern collapse performance.

IT 610301-28-5

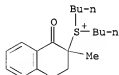
(photoacid generator; pos. resist compn. and

pattern formation method)
 RN 610301-28-5 HCA
 CN Sulfonium, dibutyl(1,2,3,4-tetrahydro-2-methyl-1-oxo-2-naphthalenyl)-
 , salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefluorobutanesulfonic acid (1:1)
 (9CI) (CA INDEX NAME)

CM 1

CRN 610301-27-4

CMF C19 H29 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$^-\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$

IC ICM C08K005-41

NCL 524155000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 38

ST pos **resist** compn photolithog UV pattern formation method

IT Polysiloxanes, uses
 (KP-341, Troysol S-366; pos. **resist** compn. and pattern
 formation method)

IT Photolithography
 (UV; pos. **resist** compn. and pattern formation method)

IT Positive **photoresists**
 (pos. **resist** compn. and pattern formation method)

IT	470482-89-4	524959-11-3	524959-16-8	524959-18-0	524959-28-2
	610301-07-0	610301-08-1	610301-09-2	610301-13-8	610301-16-1
	610301-21-8	610301-28-5	610301-34-3	676502-09-3	
	676502-10-6	676502-11-7	676502-13-9	676502-14-0	676502-16-2
	676502-18-4	676502-20-8	676502-22-0	676502-24-2	676502-25-3
	676502-26-4	676502-27-5	676502-29-7		

(photoacid generator; pos. resist compn. and pattern formation method)

IT	479081-07-7P	479081-08-8P	479081-10-2P	479081-11-3P
	479081-12-4P	479081-13-5P	479081-14-6P	479081-15-7P
	479081-18-0P	479081-19-1P	479081-21-5P	479081-22-6P
	479081-24-8P	676502-04-8P	676502-05-9P	676502-07-1P
	676502-08-2P	676522-31-9P		

(pos. resist compn. and pattern formation method)

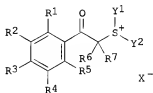
IT	60-80-0, Antipyrine	102-82-9, Tri-n-butylamine	3001-72-7,
	1,5-Diazabicyclo[4.3.0]-5-nonene	9016-45-9, Polyoxyethylene nonyl	
	phenyl ether	24544-04-5, 2,6-Diisopropylaniline	36631-19-3,
	Triphenylimidazole	41556-26-7, Bis(1,2,2,6,6,-penta	
	methyl-4-piperidyl)sebacate	137462-24-9, Megafac F176	
	216679-67-3, Megafac R08		

(pos. resist compn. and pattern formation method)

L28 ANSWER 3 OF 20 HCA COPYRIGHT 2004 ACS on STN

140:207460 Soft x-ray sensitive resist resin composition for semiconductor device fabrication. Uenishi, Kazuya; Kodama, Kunihiro; Fujimori, Toru (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2004053934 A2 20040219, 43 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-211384 20020719.

GI



AB The title compn. contains an alkali-solubilizable resin by reacting with an acid and a light- or radiation-sensitive acid generator, wherein the resin has functional group -O-C(R1a)(R2a)-O-W-O-R3a (R1a-2a = H, C1-4 alkyl; W = 2-valent org. group; R3a = C11-20 alkyl, C11-30 aryl, C12-30 aralkyl) and wherein the acid generator has general structure I (R1-5 = H, nitro, halo, alkyl, etc.; R6 = H, cyano, alkyl, aryl; R7 = alkyl, aryl; Y1-2 = alkyl, aryl, aralkyl, etc.; X- = non-nucleophilic anion). The compn. shows good sensitivity and provides photoresist of high resolu., good pattern profile, LER properties, and high dry etching-resistance.

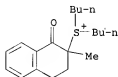
IT 610301-28-5 610301-30-9

(acid generator; soft x-ray sensitive
resist resin compn.)

RN 610301-28-5 HCA
CN Sulfonium, dibutyl(1,2,3,4-tetrahydro-2-methyl-1-oxo-2-naphthalenyl)-
, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 610301-27-4
CMF C19 H29 O S



CM 2

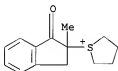
CRN 45187-15-3
CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

RN 610301-30-9 HCA
CN Thiophenium, 1-(2,3-dihydro-2-methyl-1-oxo-1H-inden-2-yl)tetrahydro-
, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 610301-29-6
CMF C14 H17 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

-O3S- (CF2)3-CF3

IC ICM G03F007-039
ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 76

ST x ray **resist** resin compn resin acid
generator

IT Semiconductor device fabrication
X-ray **resists**
(soft x-ray sensitive **resist** resin compn. for
semiconductor device fabrication)

IT 407-25-0, Trifluoroacetic acid anhydride 611-70-1,
Isobutyrophenone 1600-44-8, Tetramethylene sulfoxide 29420-49-3,
Potassium nonafluorobutanesulfonate
(acid **generator**; soft x-ray sensitive
resist resin compn.)

IT 144317-44-2 398141-18-9 470482-89-4 474510-76-4 610301-07-0
610301-08-1 610301-09-2 610301-12-7 610301-13-8 610301-16-1
610301-18-3 610301-19-4 610301-23-0 610301-28-5
610301-30-9 661461-23-0 661461-25-2
(acid **generator**; soft x-ray sensitive
resist resin compn.)

IT 110-75-8, 2-Chloroethyl vinyl ether 1131-60-8, p-Cyclohexylphenol
(resin; soft x-ray sensitive **resist** resin compn.)

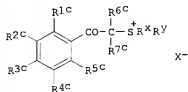
IT 24979-78-ODP, p-Acetoxystyrene homopolymer, hydrolyzed
57650-77-8DP, reaction product with polyhydroxystyrene
95418-59-ODP, p-tert-Butoxystyrene-styrene copolymer, hydrolyzed
212555-24-3DP, reaction product with polyhydroxystyrene
249562-81-ODP, reaction product with polyhydroxystyrene
249562-82-1DP, reaction product with polyhydroxystyrene
249562-84-3DP, reaction product with polyhydroxystyrene
249562-85-4DP, reaction product with polyhydroxystyrene
249562-86-5DP, reaction product with polyhydroxystyrene
249562-87-6DP, reaction product with polyhydroxystyrene
249562-88-7DP, reaction product with polyhydroxystyrene
(resin; soft x-ray sensitive **resist** resin compn.)

IT 24979-70-2, VP 8000
(resin; soft x-ray sensitive **resist** resin compn.)

L28 ANSWER 4 OF 20 HCA COPYRIGHT 2004 ACS on STN

139:388487 Positive-working light-sensitive photoresist composition containing specific photoacid generator and specific resin. Sato, Kenichiro; Kodama, Kunihiro (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003330172 A2 20031119, 70 pp; (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-138809 20020514.

GI



AB The title compn. contains a photoacid generator and a resin increasing in an alkali developer by reacting with an acid, wherein the photoacid generator has general structure I (R1c-5c = H, alkyl, alkoxy, etc.; R6c-7c = H, alkyl, aryl; Rx, Ry = alkyl, 2-oxoalkyl, alkoxy carbonylmethyl, allyl, vinyl; X- = sulfonate, carboxylate, sulfonylamide anion) or (R1d) (R2d) (R3d) S+ X- (R1d-3d = alkyl, 2-oxoalkyl; X- = anion) and wherein the resin has repeating unit II (R1-4 = H, cyano, hydrocarbon, etc.; m = 0, 1). The compn. is suitable use with ArF excimer laser and SOG substrates and provides photoresists of the good profile.

IT 477327-88-1
(pos.-working light-sensitive photoresist compn.)

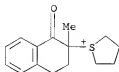
RN 477327-88-1 HCA

CN Thiophenium, tetrahydro-1-(1,2,3,4-tetrahydro-2-methyl-1-oxo-2-naphthalenyl)-, salt with trifluoromethanesulfonic acid (1:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 477327-87-0

CMF C15 H19 O S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



IC ICM G03F007-004
ICS C08F034-02; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35

ST pos laser **photoresist** compn

IT **Light-sensitive** materials
(photoacid generator; pos.-working **light-sensitive** photoresist compn.)

IT **Photoresists**
(pos.-working **light-sensitive** photoresist compn.)

IT 625092-97-9P 625092-98-0P 625092-99-1P 625093-01-8P
625093-02-9P 625093-04-1P 625093-06-3P
(pos.-working **light-sensitive** photoresist compn.)

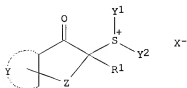
IT 144089-15-6 241806-75-7 258342-00-6 258872-05-8 284474-28-8
301153-77-5 301664-71-1 454471-07-9 470482-89-4 474510-73-1
477327-88-1 610301-07-0 625093-08-5
(pos.-working **light-sensitive** photoresist compn.)

L28 ANSWER 5 OF 20 HCA COPYRIGHT 2004 ACS on STN

139:330330 Chemically amplified **photoresist** compositions with high sensitivity and resolution. Kodama, Kunihiro (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003302754 A2

20031024, 63 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
2002-110738 20020412.

GI



I

AB The resist comps., useful for excimer laser development, contain **photoacid generators I** (R_1 = H, alkyl, aryl, cyano; Y_1 , Y_2 = alkyl, aryl, aralkyl, heteroring; Y = condensed arom. group, heteroring; Z = single bond, divalent linking group; X^- = nonnucleophilic anion).

IT 615278-17-6

(photoacid generator; sulfonium-based photoacid generators for excimer laser-sensitive photoresists with high sensitivity and resolu.)

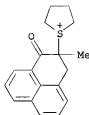
RN 615278-17-6 HCA

CN Thiophenium, 1-(2,3-dihydro-2-methyl-1-oxo-1H-phenalen-2-yl)tetrahydro-, salt with 3,5-bis(trifluoromethyl)benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 615278-16-5

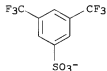
CMF C18 H19 O S



CM 2

CRN 213740-84-2

CMF C8 H3 F6 O3 S



- IC ICM G03F007-004
ICS G03F007-038; G03F007-039; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST **photoresist** excimer laser sensitivity **photoacid** generator; chem amplification **photoresist** resolu sulfonium **PAG**
- IT Sulfonium compounds
(arene, **photoacid** generators; sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resolu.)
- IT Aromatic compounds
(sulfonium, **photoacid** generators; sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resolu.)
- IT **Photoresists**
(sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resolu.)
- IT 24979-70-2, p-Hydroxystyrene homopolymer
(VP 5000, VP 8000; sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resolu.)
- IT 141-07-1 3089-11-0 4356-60-9 17464-88-9 161679-94-3
162846-57-3 162846-59-5 185502-14-1
(crosslinker; sulfonium-based **photoacid** generators for excimer laser-sensitive **photoresists** with high sensitivity and resolu.)
- IT 615277-73-1 615277-76-4 615277-79-7 615277-81-1 615277-83-3
615277-86-6 615277-87-7 615277-90-2 615277-92-4 615277-95-7
615277-98-0 615278-00-7 615278-02-9 615278-05-2 615278-08-5
615278-11-0 615278-14-3 **615278-17-6** 615278-20-1
615278-23-4 615278-26-7 615278-29-0 615278-32-5
(**photoacid** generator; sulfonium-based **photoacid**

- generators for excimer laser-sensitive photoresists with high sensitivity and resolu.)
- IT 615277-70-8P
(photoacid generator; sulfonium-based photoacid generators for excimer laser-sensitive photoresists with high sensitivity and resolu.)
- IT 615277-67-3P
(sulfonium-based photoacid generators for excimer laser-sensitive photoresists with high sensitivity and resolu.)
- IT 109-92-2DP, Ethyl vinyl ether, ethers with hydroxystyrene homopolymer 24979-70-2DP, VP 15000, ethers with Et vinyl ether
129674-22-2P 143336-94-1P 159296-87-4P 177034-73-0P
177034-75-2P 199432-82-1P 200808-68-0P 228101-60-8P
250378-10-0P, Butyrolactone methacrylate-2-ethyl-2-adamantyl methacrylate copolymer 288620-13-3P 288620-15-5P 289623-64-9P
289706-85-0P 312620-54-5P 325143-38-2P 326591-96-2P
359635-35-1P 366808-82-4P 370102-83-3P 372968-15-5P
391232-36-3P 391613-77-7P 398140-38-0P 398140-43-7P
398140-45-9P 398140-59-5P 398140-68-6P 398140-69-7P
398140-77-7P 398140-80-2P 405509-19-5P 406702-00-9P
430437-18-6P 459418-30-5P 482609-97-2P 503003-65-4P
508210-04-6P 515876-73-0P 521303-15-1P 521303-16-2P
524699-47-6P 574735-94-7P 607710-65-6P 607710-66-7P
607710-67-8P 607710-68-9P 607710-69-0P 607710-70-3P
607710-71-4P 607710-72-5P 607710-73-6P 607710-76-9P
607710-77-0P 610300-92-0P 610300-96-4P 610300-97-5P
610300-98-6P 610301-00-3P 610301-01-4P 610301-03-6P
610301-04-7P 610301-05-8P 615278-33-6P 615278-35-8P
615278-38-1P
(sulfonium-based photoacid generators for excimer laser-sensitive photoresists with high sensitivity and resolu.)
- IT 75-77-4, Chlorotrimethylsilane, reactions 1600-44-8, Tetramethylenesulfoxide 54784-07-5
(sulfonium-based photoacid generators for excimer laser-sensitive photoresists with high sensitivity and resolu.)
- IT 24979-69-9, Phenol, 3-ethenyl-, homopolymer 185405-14-5
321164-59-4 345212-27-3
(sulfonium-based photoacid generators for excimer laser-sensitive photoresists with high sensitivity and resolu.)

L28 ANSWER 6 OF 20 HCA COPYRIGHT 2004 ACS on STN

139:314532 Radiation sensitive composition and compound. Kodama, Kunihiro (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 1353225 A2 20031015, 99 pp. DESIGNATED STATES: R: AT, BE, CH, DE,

DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK. (English). CODEN: EPXXDW. APPLICATION: EP 2003-7989 20030410. PRIORITY: JP 2002-108104 20020410; JP 2002-240661 20020821.

AB The present invention relates to a stimulation sensitive compn. used for a semiconductor prodn. process such as IC, a liq. crystal, the prodn. of a circuit substrate such as a thermal head, further, other photo application system, lithog. printing, an acid curing compn., a radical curing compn. and the like. The present invention relates to a stimulation sensitive compn. comprising: (A) a compd. represented by: $\text{ArC(=O)CR}_6\text{R}_7\text{S}^+\text{Y}_1\text{Y}_2\text{X}^-$ (Ar = aryl or arom. group contg. a hetero atom; $\text{R}_6 = \text{H}$, cyano, alkyl, aryl group; $\text{R}_7 =$ monovalent org. group; $\text{Y}_1, \text{Y}_2 =$ alkyl, aryl, aralkyl, etc.; $\text{X}^- =$ non-nucleophilic anion) which is capable of generating an acid or a radical by stimulation from the external. (B) a resin.

IT 610301-26-3 610301-28-5 610301-30-9

610301-32-1

(acid generating agent; radiation sensitive resist compn. for semiconductor prodn. process contg.)

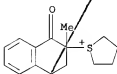
RN 610301-26-3 HCA

CN Thiophenium, tetrahydro-1-(1,2,3,4-tetrahydro-2-methyl-1-oxo-2-naphthalenyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 477327-87-0

CMF C15 H19 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$^-\text{O}_3\text{S}-\text{(CF}_2\text{)}_3-\text{CF}_3$

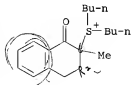
RN 610301-28-5 HCA

CN Sulfonium, dibutyl (1,2,3,4-tetrahydro-2-methyl-1-oxo-2-naphthalenyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 610301-27-4

CMF C19 H29 O S



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

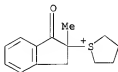
RN 610301-30-9 HCA

CN Thiophenium, 1-(2,3-dihydro-2-methyl-1-oxo-1H-inden-2-yl) tetrahydro-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 610301-29-6

CMF C14 H17 O S



CM 2

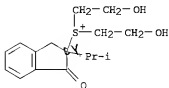
CRN 45187-15-3
CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

RN 610301-32-1 HCA
CN Sulfonium, [2,3-dihydro-2-(1-methylethyl)-1-oxo-1H-inden-2-yl]bis(2-hydroxyethyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butan-1-sulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 610301-31-0
CMF C16 H23 O3 S



CM 2

CRN 45187-15-3
CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

IC ICM G03F007-004
ICS G03F007-039; G03F007-038; C07C323-22
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38
ST lithog printing radiation sensitive **resist** compn
IT Lithography
(radiation sensitive **resist** compn. for semiconductor prodn. process)
IT **Resists**
(radiation-sensitive; radiation sensitive compn. and compd. for)
IT 470482-89-4P 610301-07-0P
(acid generating agent; radiation sensitive

resist compn. for semiconductor prodn. process contg.)

IT 66003-78-9 133710-62-0 138529-81-4 144317-44-2 193345-23-2
 197447-16-8 220475-58-1 227199-92-0 241806-75-7 258341-98-9
 258872-05-8 284474-28-8 301153-77-5 301664-71-1 301664-72-2
 347193-28-6 389859-76-1 391232-40-9 398141-17-8 398141-18-9
 398141-19-0 474510-76-4 592544-87-1 610301-08-1 610301-09-2
 610301-10-5 610301-12-7 610301-13-8 610301-14-9 610301-16-1
 610301-18-3 610301-19-4 610301-21-8 610301-23-0 610301-25-2
 610301-26-3 610301-28-5 610301-30-9
 610301-32-1 610301-34-3 610301-36-5 610301-38-7
 610301-40-1 610301-42-3 610301-44-5 610301-46-7 610301-47-8
 610301-48-9

(acid generating agent; radiation sensitive
 resist compn. for semiconductor prodn. process contg.)

IT 75-77-4, Chlorotrimethylsilane, reactions 513-36-0
 827-52-1, Phenylcyclohexane 1600-44-8, Tetramethylenesulfoxide
 2168-93-6, Dibutylsulfoxide 13547-70-1 20907-24-8

(prepn. of radiation sensitive resist
 compn. for semiconductor prodn. process)

IT 5195-24-4P 56346-00-0P

(prepn. of radiation sensitive resist compn. for
 semiconductor prodn. process)

IT 24979-69-9P 24979-70-2P, VP-5000 143336-94-1P 185405-14-5P
 250378-10-0P, Butyrolactone methacrylate-2-Ethyl-2-adamantyl
 methacrylate copolymer 289623-64-9P 312620-54-5P 321164-59-4P
 345212-27-3P 359635-35-1P 370102-83-3P 370866-39-0P
 391232-36-3P 391613-77-7P 398140-43-7P 398140-45-9P
 398140-57-3P 398140-59-5P 398140-68-6P 398140-69-7P
 398140-77-7P 405509-19-5P 406702-00-9P 430437-18-6P
 459418-30-5P 471257-28-0P 482609-97-2P 508210-04-6P
 515876-73-0P 521303-15-1P 521303-16-2P 524699-47-6P
 574735-94-7P 607710-65-6P 607710-66-7P 607710-67-8P
 607710-68-9P 607710-69-0P 607710-70-3P 607710-71-4P
 607710-72-5P 607710-73-6P 607710-76-9P 607710-77-0P
 610300-92-0P 610300-93-1P 610300-94-2P 610300-95-3P
 610300-96-4P 610300-97-5P 610300-98-6P 610301-00-3P
 610301-01-4P 610301-03-6P 610301-04-7P 610301-05-8P

(radiation sensitive resist compn. for semiconductor
 prodn. process contg.)

IT 129674-22-2 158593-28-3 177034-75-2 200808-68-0 325143-38-2
 372968-15-5 610301-49-0 610301-50-3

(radiation sensitive resist compn. for semiconductor
 prodn. process contg.)

IT 120-07-0, N-Phenyldiethanolamine 484-47-9, 2,4,5-
 Triphenylimidazole 621-77-2, Tripentylamine 1116-76-3,
 Tri-n-octylamine 1672-63-5, 4-Hydroxyantipyrine 2052-49-5,
 Tetrabutylammonium hydroxide 3001-72-7, 1,5-Diazabicyclo[4,3,0]non-
 5-ene 3040-44-6, 1-Piperidineethanol 19293-63-1,

Dicyclohexylmethylamine 19600-49-8, Triphenylsulfonium acetate
 24544-04-5, 2,6-Diisopropylaniline 70384-51-9
 (radiation sensitive resist compn. for semiconductor
 prodn. process contg.)

L28 ANSWER 7 OF 20 HCA COPYRIGHT 2004 ACS on STN

138:9656 Positive **photosensitive composition**.

Kodama, Kunihiro; Sato, Kenichiro; Fujimori, Toru (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 1260864 A1 20021127, 145 pp.
 DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR.
 (English). CODEN: EPXXDW. APPLICATION: EP 2002-11516 20020522.
 PRIORITY: JP 2001-152587 20010522; JP 2001-155897 20010524; JP 2001-159060 20010528.

AB A pos. **photosensitive compn.** comprises (A) a specific **acid generator** that **generates** an **acid** upon irradiation of an actinic ray or radiation, and (B) a resin that has a monocyclic or polycyclic alicyclic hydrocarbon structure and is decompd. by the action of an acid to increase soly. in an alkali developing soln.

IT 477327-88-1P

(acid generator; pos photoresist compn. contg.)

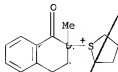
RN 477327-88-1 HCA

CN Thiophenium, tetrahydro-1-(1,2,3,4-tetrahydro-2-methyl-1-oxo-2-naphthalenyl)-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 477327-87-0

CMF C15 H19 O S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



- IC ICM G03F007-039
ICS G03F007-004
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38
- ST pos photoresist compn acid generator resin
- IT Positive photoresists
(pos. photosensitive compn.)
- IT Polysiloxanes, uses
(surface active agent; pos photoresist compn. contg.)
- IT 340986-46-1P 340986-47-2P 454471-15-9P 474276-93-2P
474510-79-7P 474510-86-6P 474510-92-4P 474510-98-0P
474511-05-2P 474511-06-3P 477327-74-5P 477327-75-6P
477327-76-7P 477327-78-9P 477327-80-3P 477327-82-5P
477327-84-7P 477327-86-9P 477327-88-1P 477327-90-5P
477327-91-6P 477327-93-8P 477327-95-0P 477327-97-2P
477327-98-3P 477328-00-0P 477328-02-2P 477328-04-4P
477328-06-6P 477328-08-8P 477328-10-2P 477328-11-3P
477328-12-4P 477328-13-5P 477328-14-6P 477328-15-7P
477328-16-8P 477328-17-9P 477328-18-0P 477328-19-1P
477328-20-4P 477328-21-5P 477328-22-6P 477328-23-7P
477328-24-8P 477328-26-0P 477328-28-2P 477328-30-6P
477328-31-7P 477328-33-9P 477328-35-1P 477328-36-2P
477328-37-3P 477328-38-4P 477328-39-5P
(acid generator; pos photoresist compn. contg.)
- IT 1116-76-3, Trioctylamine
(additive; pos photoresist compn. contg.)
- IT 60-80-0, Antipyrine 484-47-9, 2,4,5-Triphenylimidazole
3001-72-7, {1,5-Diazabicyclo[4.3.0]non-5-ene} 3040-44-6,
1-Piperidineethanol 19293-63-1, Dicyclohexylmethylamine
19600-49-8, Triphenylsulfonium acetate 24544-04-5,
2,6-Diisopropylaniline 41556-26-7, Bis1,2,2,6,6-pentamethyl-4-
piperidyl sebacate 169965-90-6, tert-Butyl lithocholate
(base compd.; pos photoresist compn. contg.)
- IT 398140-50-6P 398140-85-7P
(pos photoresist compn. contg.)
- IT 75-77-4, Chlorotrimethylsilane, reactions 100-68-5, Thioanisole
1600-44-8, Tetramethylene sulfoxide 29059-07-2, Tetralone

29420-49-3, Potassium nonafluorobutanesulfonate
(prepn. of acid generator for pos
photoresist compn.)

IT	250378-10-0P	288303-55-9P	364736-22-1P	391232-36-3P
	391613-77-7P	398140-36-8P	398140-38-0P	398140-40-4P
	398140-43-7P	398140-45-9P	398140-47-1P	398140-48-2P
	398140-52-8P	398140-54-0P	398140-55-1P	398140-57-3P
	398140-59-5P	398140-60-8P	398140-62-0P	398140-64-2P
	398140-65-3P	398140-68-6P	398140-69-7P	398140-71-1P
	398140-73-3P	398140-74-4P	398140-76-6P	398140-77-7P
	398140-78-8P	398140-79-9P	398140-80-2P	398140-81-3P
	398140-82-4P	398140-84-6P	398140-86-8P	398140-87-9P
	398140-88-0P	398140-89-1P	398140-90-4P	398140-91-5P
	398140-92-6P	398140-93-7P	398140-94-8P	398140-95-9P
	398140-97-1P	398140-98-2P	398140-99-3P	398141-00-9P
	398141-03-2P	398141-04-3P	398141-05-4P	398141-06-5P
	398141-07-6P	398141-08-7P	398141-10-1P	398141-11-2P
	398141-13-4P	398141-14-5P	398141-16-7P	398152-52-8P
	405509-18-4P	405509-20-8P	405509-25-3P	405509-30-0P
	454470-66-7P	454470-67-8P	454470-68-9P	454470-70-3P
	454470-71-4P	454470-72-5P	454470-73-6P	454470-74-7P
	454474-57-8P	455901-72-1P		

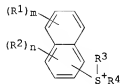
(resin; pos photoresist compn. contg.)

IT	9016-45-9, Polyoxyethylene nonyl phenyl ether	137462-24-9, Megafac
	F 176 216679-67-3, Megafac R 08	
	(surface active agent; pos photoresist compn. contg.)	

L28 ANSWER 8 OF 20 HCA COPYRIGHT 2004 ACS on STN

126:264473 Sulfonium salt compounds, polymerization initiators, curable compositions and curing method. Takahashi, Eiji (Nippon Soda Co., Ltd., Japan; Takahashi, Eiji). PCT Int. Appl. WO 9708141 A1 19970306, 37 pp. DESIGNATED STATES: W: US; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (Japanese). CODEN: PIXXD2. APPLICATION: WO 1996-JP2333 19960821. PRIORITY: JP 1995-236140 19950822.

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X⁻ I

AB Curable compns. contg. compds. I (R1, R2 = alkyl, OH, alkoxy, alkylcarbonyl, arom. carbonyl, arom. thio, halo; R3 = alkyl; R4 = optionally substituted alkyl, alkenyl, cycloalkyl; X = non-nucleophilic anionic residue; m, n = 0-3), cationically polymerizable compds., and optionally sensitizers, is usable appropriately in coatings, adhesives, photoresists, etc. Thus, a compn. contg. ERL 4221 (alicyclic epoxy resin) and 2-naphthyl 2-indanyl methylsulfonium hexafluorophosphate showed good storage stability and curability.

IT 188732-08-3P

(prepn. of sulfonium salt compds. as polymn. initiators and curing catalysts for epoxy resin compns.)

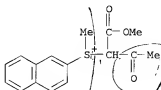
RN 188732-08-3 HCA

CN Sulfonium, [1-(methoxycarbonyl)-2-oxopropyl]methyl-2-naphthalenyl-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 188732-07-2

CMF C16 H17 O3 S

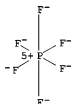


CM 2

CRN 16919-18-9

CMF F6 P

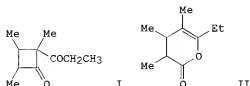
CCI CCS



- IC ICM C07C381-12
ICS C08G059-68; G03F007-031
- CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 25, 37, 67
- ST naphthyl sulfonium compd polymn initiator; epoxy resin curing catalyst sulfonium compd; UV curable epoxy resin catalyst; thermal polymn catalyst sulfonium compd; storage stability sulfonium compd catalyst
- IT 26708-04-3, 2-Ethyl-9,10-dimethoxyanthracene 75081-21-9, Isopropylthioxanthone 76293-13-5, 2,4-Dimethylthioxanthone 82799-44-8, 2,4-Diethylthioxanthone (photosensitizer; prepn. of sulfonium salt compds. as polymn. initiators and curing catalysts for epoxy resin compns.)
- IT 188731-58-0P 188731-61-5P 188731-63-7P 188731-65-9P
188731-67-1P 188731-69-3P 188731-71-7P 188731-73-9P
188731-75-1P 188731-77-3P 188731-79-5P 188731-80-8P
188731-82-0P 188731-84-2P 188731-86-4P 188731-88-6P
188731-90-0P 188731-92-2P 188731-94-4P 188731-96-6P
188731-98-8P 188732-00-5P 188732-02-7P 188732-04-9P
188732-06-1P 188732-08-3P 188732-10-7P
(prepn. of sulfonium salt compds. as polymn. initiators and curing catalysts for epoxy resin compns.)
- L28 ANSWER 9 OF 20 HCA COPYRIGHT 2004 ACS on STN
- 108:131508 Fluoride anion induced novel reaction α -(sulfonio) ketone triflate. Ito, Yoshihiko; Nakajo, Eiichi; Sho, Katsuhiko; Tamao, Kohei (Dep. Synth. Chem., Kyoto Univ., Kyoto, 606, Japan). Tetrahedron Letters, 28(20), 2247-50 (English) 1987. CODEN: TELEAY. ISSN: 0040-4039. OTHER SOURCES: CASREACT 108:131508.

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AB α -(Phenylmethylsulfonio) ketone triflates are treated with a suspension of KF in aprotic polar solvent to give dimeric 2-acylcyclobutanones, which are rearranged to γ, δ -unsatd. 8-valerolactones by acid catalyst. Thus, treatment of $\text{MeCH}_2\text{COCHMeS}^+\text{MePh}$ triflate- with KF in MeCN gave acylcyclobutanone I which was isomerized to give 100% lactone II.

IT 113503-27-8P 113503-36-9P
(prepn. and fluoride ion-catalyzed cyclization of)

RN 113503-27-8 HCA

CN Sulfonium, methyl(1-methyl-2-oxobutyl)phenyl-, (R^*, S^*)-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 113503-26-7

CMF C12 H17 O S

Relative stereochemistry.



CM 2

CRN 37181-39-8

CMF C F3 O3 S



RN 113503-36-9 HCA

CN Sulfonium, methylphenyl-, 1-methyl-2-oxopropylide (9CI) (CA INDEX NAME)



IT 113503-13-2P

(prepn. and fluoride iron-catalyzed cyclization of)

RN 113503-13-2 HCA

CN Sulfonium, methyl(1-methyl-2-oxobutyl)phenyl-, (R*,R*)-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 113503-12-1

CMF C12 H17 O S

Relative stereochemistry.



CM 2

CRN 37181-39-8

CMF C F3 O3 S



IT 113503-23-4
 (reaction of, with potassium fluoride)
 RN 113503-23-4 HCA
 CN Sulfonium, methyl(1-methyl-2-oxopropyl)phenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 113503-22-3

CMF C11 H15 O S



CM 2

CRN 37181-39-8

CMF C F3 O3 S



CC 27-13 (Heterocyclic Compounds (One Hetero Atom))

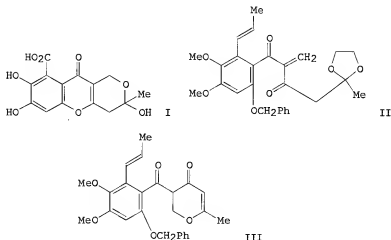
Section cross-reference(s): 23

IT 113503-24-5P 113503-25-6P
 (prepn. and acid-catalyzed rearrangement of)
 IT 113503-27-8P 113503-33-6P 113503-34-7P 113503-35-8P
 113503-36-9P
 (prepn. and fluoride ion-catalyzed cyclization of)
 IT 113503-13-2P
 (prepn. and fluoride iron-catalyzed cyclization of)

IT 113503-17-6 113503-19-8 113503-21-2 113503-23-4
(reaction of, with potassium fluoride)

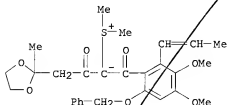
L28 ANSWER 10 OF 20 HCA COPYRIGHT 2004 ACS on STN
107:236301 Studies on the syntheses of heterocyclic compounds containing benzopyrone. Part 5. Total synthesis of fulvic acid. Yamauchi, Masashige; Katayama, Sadamu; Todoroki, Toshiharu; Watanabe, Toshio (Fac. Pharm. Sci., Josai Univ., Sakado, 350-02, Japan). Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (2), 389-94 (English) 1987. CODEN: JCPRB4. ISSN: 0300-922X. OTHER SOURCES: CASREACT 107:236301.

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AB Fulvic acid (I) was **prepd.** via regioselective cyclization of the enedione II to the pyrone III, which led to I by a route involving debenzoylation, selective ozonization, and hydration.
IT 111492-54-7P
(prepn. and redn. of)
RN 111492-54-7 HCA

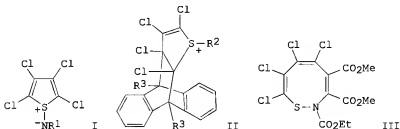
CN Sulfonium, dimethyl-, 1-[3,4-dimethoxy-6-(phenylmethoxy)-2-(1-propenyl)benzoyl]-3-(2-methyl-1,3-dioxolan-2-yl)-2-oxopropylide
(9CI) (CA INDEX NAME)



CC 26-6 (Biomolecules and Their Synthetic Analogs)
ST fulvic acid total synthesis;
phenylmethylenhexanetrione rearrangement; benzoylpyranone prepn
cyclization
IT 95730-77-1P
(prepn. and methanesulfinic acid from)
IT 111492-54-7P
(prepn. and redn. of)

L28 ANSWER 11 OF 20 HCA COPYRIGHT 2004 ACS on STN
106:67031 Thiophene S,N-ylides: a new versatile class of sulfimides.
Meth-Cohn, Otto; Van Vuuren, Gerda (Nat'l. Chem. Res. Lab., CSIR,
Pretoria, 0001, S. Afr.). Journal of the Chemical Society, Perkin
Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (2),
233-43 (English) 1986. CODEN: JCPRB4. ISSN: 0300-922X. OTHER
SOURCES: CASREACT 106:67031.

GI



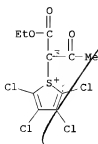
AB Tetrachlorothiophene reacts with $\text{N}_3\text{CO}_2\text{R}$ ($\text{R} = \text{Me}, \text{Et}, \text{Ph}$) and with 4-MeC₆H₄SO₂N₃ at 130-150 ° to give stable thiophene S,N-ylides I ($\text{R}_1 = \text{CO}_2\text{R}$, 4-MeC₆H₄SO₂). 2,5-Dichloro- and 2,5-dibromothiophenes and tetrabromothiophene yield products derived by nitrene attack at the α -position. The S,N-ylides undergo ready photolysis to liberate the parent nitrene, and react with a wide variety of electron-rich dienophiles as 4π -components to give tetrachlorodihydrobenzenes with extrusion of a thionitroso compd. With dienes the ylides react either as 2π - or 4π -systems. Thus, with anthracene a dihydrothiophene analog II ($\text{R}_2 = \text{NCO}_2\text{Et}$, $\text{C}(\text{CO}_2\text{Me})_2$; $\text{R}_3 = \text{H}, \text{Me}$) or triptycene is generated, efficiently aromatized and de-ylidated with zinc in methanol. With di-Me acetylenedicarboxylate the ylides yield a thiazocine III by a novel ring expansion. Oxidn. of the ylide system with 3-chloroperbenzoic acid gives the corresponding ylide S-oxide. Tetrachlorothiophene also reacts efficiently with diazoalkanes under rhodium acetate catalysis to give thiophene S,C-ylides, which undergo cycloaddn. with nucleophilic alkenes much more slowly than their nitrogen analogs.

IT 106550-56-5P

(prepn. of)

RN 106550-56-5 HCA

CN Thiophenium, 2,3,4,5-tetrachloro-, 1-(ethoxycarbonyl)-2-oxopropylide (9CI) (CA INDEX NAME)



CC 27-8 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 28

IT 7311-68-4P, 3,5-Dibromothiophene-2-carboxylic acid

(prepn. and acyl chlorination of)

IT	634-66-2P	17875-29-5P	72524-27-7P	72524-36-8P	72524-60-8P
	72541-72-1P	72541-91-4P	90454-53-8P	90454-55-0P	90454-56-1P
	90454-57-2P	100100-93-4P	105752-81-6P	106550-52-1P	
	106550-53-2P	106550-54-3P	106550-56-5P	106550-57-6P	
	106550-58-7P	106550-59-8P	106550-61-2P	106550-63-4P	
	106550-64-5P	106550-65-6P	106550-66-7P	106550-67-8P	

106550-68-9P 106566-91-0P
(prepn. of)

L28 ANSWER 12 OF 20 HCA COPYRIGHT 2004 ACS on STN
102:113039 Vicinal polycarbonyl compounds. Koenig, Horst (BASF A.-G., Fed. Rep. Ger.). Ger. Offen. DE 3313917 A1 19841025, 15 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1983-3313917 19830416.
AB RCOCOR1 [R = alkyl, aryl, EtO, (substituted) amino] were prepd. by photochem. oxidn. of 5 ylides. Thus, 5.4 g (PhNHCO)(EtO2C)C:SMe2 and 0.5 g Rose Bengal in 110 mL EtOH were added over 15 min to 400 mL CS2 and 150 mL EtOH at 10° in a photoreactor with passage of 50 L O/h to give 8.8 g crude PhNHCOCOCOC2Et.
IT 7039-28-3
(photochem. oxidn. of)
RN 7039-28-3 HCA
CN Sulfonium, dimethyl-, 1-acetyl-2-oxopropylide (9CI) (CA INDEX NAME)



IC C07C069-738; C07C059-84; C07C049-86; C07C049-12; C07C103-34
CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 23
IT 7039-28-3 14070-66-7 16980-32-8 20912-85-0
95304-39-5 95304-41-9 95304-42-0 95304-44-2 95304-45-3
(photochem. oxidn. of)

L28 ANSWER 13 OF 20 HCA COPYRIGHT 2004 ACS on STN
97:87619 Direct carbon-13 NMR evidence for a tetrahedral intermediate in the binding of a pepstatin analog to porcine pepsin. Rich, Daniel H.; Bernatowicz, Michael S.; Schmidt, Paul G. (Sch. Pharm., Univ. Wisconsin, Madison, WI, 53706, USA). Journal of the American Chemical Society, 104(12), 3535-6 (English) 1982. CODEN: JACSAT. ISSN: 0002-7863.
AB A ketone analog of pepstatin, Iva-Val-Sta-Ala-NH2C5H11 (I), where Sta = (4S)-amino-3-oxo-6-methylheptanoic acid, was synthesized isotopically enriched at the C-3 position of the Sta residue and its 13C NMR spectra measured in soln. and after binding to porcine pepsin. In soln., the isotopically enriched C-3 is found at 204.2 (CHCl3) ppm. When the ketone is added to 1 equiv of pepsin, the signal shifts to 99.1 ppm. When 1 equiv of pepstatin is added to this soln. to displace the ketone inhibitor from the

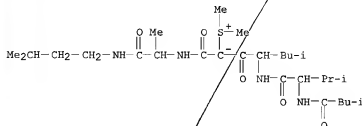
enzyme, the labeled-C signal is found at 207.2 ppm. The upfield shift of 105-108 ppm for the C-3 resonance is direct evidence of a tetrahedral C-3 when inhibitor I is bound to pepsin and is consistent with the addn. of an O nucleophile to the carbonyl group. The ^{13}C NMR properties of a [2-dimethylsulfonium]-3-oxo-4S-amino-6-methylheptanoic acid analog of I are also described.

IT 81875-70-9 81875-71-0

(NMR of carbon-13 in)

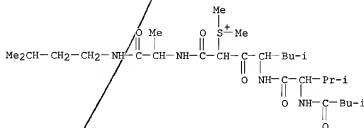
RN 81875-70-9 HCA

CN Sulfonium, dimethyl-, 5-methyl-1-[[[1-methyl-2-[(3-methylbutyl)amino]-2-oxoethyl]amino]carbonyl]-3-[[[3-methyl-2-[(3-methyl-1-oxobutyl)amino]-1-oxobutyl]amino]-2-oxohexylide, [3S-[1(R*),3R*(R*)]]- (9CI) (CA INDEX NAME)



RN 81875-71-0 HCA

CN Sulfonium, dimethyl-[5-methyl-1-[[[1-methyl-2-[(3-methylbutyl)amino]-2-oxoethyl]amino]carbonyl]-3-[[[3-methyl-2-[(3-methyl-1-oxobutyl)amino]-1-oxobutyl]amino]-2-oxohexyl]-, [3S-[1(R*),3R*(R*)]]- (9CI) (CA INDEX NAME)



CC 7-3 (Enzymes)

IT 81875-70-9 81875-71-0 81875-72-1

(NMR of carbon-13 in)

L28 ANSWER 14 OF 20 HCA COPYRIGHT 2004 ACS on STN

93:7172 Selectivity in the electrophilic addition of carbenes and nitrenes to aliphatic sulfides and to 4-tert-butylthiane. Appleton, David C.; Bull, David C.; McKenna, James; McKenna, Jean M.; Walley, Andrew R. (Chem. Dep., Univ. Sheffield, Sheffield, S3 7HF, UK). Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999) (2), 385-90 (English) 1980. CODEN: JCPKBH. ISSN: 0300-9580.

AB **Photogenerated bis(alkoxycarbonyl)- and diacetylcarbenes** add exclusively equatorially to 4-tert-butylthiane and exhibit selectivity in competitive addns. to mixts. of Me₂S and (Me₂CH)₂S. (Ethoxycarbonyl)- and p-toluenesulfonylnitrenes give equal proportions of axial and equatorial adducts with the thiane and show no selectivity in competitive reactions with dialkyl sulfides. The results are largely detd. by kinetic control.

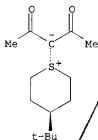
IT 53121-09-8P 73853-58-4P

(prepn. of)

RN 53121-09-8 HCA

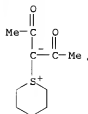
CN 2H-Thiopyranium, 4-(1,1-dimethylethyl)tetrahydro-,
1-acetyl-2-oxopropylide, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 73853-58-4 HCA

CN 2H-Thiopyranium, tetrahydro-, 1-acetyl-2-oxopropylide (9CI) (CA
INDEX NAME)



CC 22-3 (Physical Organic Chemistry)

IT 53121-09-8P 53121-10-1P 53121-11-2P 70528-34-6P

73853-58-4P 73853-59-5P 73853-60-8P 73853-61-9P

73853-62-0P 73853-63-1P

(prepn. of)

L28 ANSWER 15 OF 20 HCA COPYRIGHT 2004 ACS on STN

92:163334 **Photosensitized** oxygenation of carbonyl stabilized sulfur and pyridinium ylides and related diazo compounds. Carbon-sulfur and nitrogen bond cleavages. Ando, Wataru; Kohmoto, Shigeo; Miyazaki, Hajime; Nishizawa, Kyojun; Tsumaki, Hidetoshi (Dep. Chem., Univ. Tsukuba, Ibaraki, 300-31, Japan). Photochemistry and Photobiology, 30(1, Chemi- Bioenergized Processes), 81-7 (English) 1979. CODEN: PHCBAP. ISSN: 0031-8655.

AB Under the reaction conditions studied, dye-sensitized photooxygenation of the title ylides proceeded via singlet O. Photooxygenation of oxosulfonium and pyridinium methylides gave DMSO and pyridine as the major cleavage products. These results suggest that 1,2-dioxetane-type intermediates are not significant in these reactions. Oxygenation reactions in the presence of Ph2S gave Ph2SO. A new type of intermediate that can monooxygenate the substrate is suggested. **Photosensitized** oxygenations of corresponding diazo compds. were also studied.

IT 7039-28-3P

(prepn. and **photosensitized** oxygenation of)

RN 7039-28-3 HCA

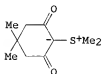
CN Sulfonium, dimethyl-, 1-acetyl-2-oxopropylide (9CI) (CA INDEX NAME)



- CC 22-5 (Physical Organic Chemistry)
 ST photosensitized oxygenation sulfur pyridinium ylide;
 diazomalonate photosensitized oxygenation; diazodimedone
 photosensitized oxygenation
 IT 1807-68-7 3469-17-8 6773-29-1
 (photosensitized oxygenation of)
 IT 1291-37-8 17870-68-7 24420-62-0
 (photosensitized oxygenation of, in presence and
 absence of di-Ph sulfide)
 IT 5633-34-1P 7039-28-3P 32618-73-8P
 (prepn. and photosensitized oxygenation of)

L28 ANSWER 16 OF 20 HCA COPYRIGHT 2004 ACS on STN
 89:179563 Synthesis and properties of 2-diazo-1,3-dicarbonyl compounds.
 IV. Photolysis of 2-diazo-1,3-diketones in dialkyl sulfides.
 Nikolaev, V. A.; French, J.; Korobitsyna, I. K. (Leningr. Gos.
 Univ., Leningrad, USSR). Zhurnal Organicheskoi Khimii, 14(7),
 1433-41 (Russian) 1978. CODEN: ZORKAE. ISSN: 0514-7492. OTHER
 SOURCES: CASREACT 89:179563.

GI



III

- AB Photolysis of $\text{RCOC}(:\text{N}_2)\text{COR}$ [I; $\text{R}_2 = \text{CH}_2\text{CH}_2$, $(\text{CH}_2)_3$, $\text{CH}_2\text{CMe}_2\text{CH}_2$ (II)]
 in R_1S ($\text{R}_1 = \text{Me}$, Et) afforded 90-5% oligomeric acylketenes (via
 Wolff rearrangement), which was cleaved with HX ($\text{X} = \text{OH}$, OMe , OEt ,
 NEt_2 , NHPh) to give the correspondence RCOCHRCOX in 60-76% yield; II
 and PhNH_2 gave PhNHCR:CRCONHPh product. Irradn. of ylide III gave
 the oligomer from II. Analogous treatment of I ($\text{R} = \text{Me}$, Et, Me_2CH)
 gave $(\text{RCO})_2\text{C-S+Me}_2$ (IV) and product: via Wolff rearrangement. IV

yield decreased in a state order R. I (R = Me3C) gave 53% Me3CCOC(CMe3):CO (V) and 32% 2,2-dimethyl-4-pivaloylcyclobutanone (VI) under similar conditions and of V, VI and Me3CCOCH2CMe2CO2H and Et2O or aq. THF.

IT 7039-28-3P 67832-65-9P 67832-66-0P

(prepn. of)

RN 7039-28-3 HCA

CN Sulfonium, dimethyl-, 1-acetyl-2-oxopropylide (9CI) (CA INDEX NAME)



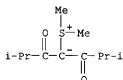
RN 67832-65-9 HCA

CN Sulfonium, dimethyl-, 2-oxo-1-(1-oxopropyl)butylide (9CI) (CA INDEX NAME)



RN 67832-66-0 HCA

CN Sulfonium, dimethyl-, 3-methyl-1-(2-methyl-1-oxopropyl)-2-oxobutylide (9CI) (CA INDEX NAME)



CC 24-1 (Alicyclic Compounds)

Section cross-reference(s): 23

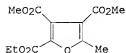
IT Ketones, reactions

(diaz di-, photolysis of, in dialkyl sulfides)

IT 7039-28-3P 22704-18-3P 22773-08-6P 31380-45-7P
 50882-16-1P 60585-44-6P 67391-55-3P 67391-56-4P 67391-57-5P
 67398-43-0P 67398-44-1P 67398-45-2P 67398-46-3P
 67832-65-9P 67832-66-0P 67832-67-1P
 67832-68-2P 67832-69-3P
 (prepn. of)

L28 ANSWER 17 OF 20 HCA COPYRIGHT/2004 ACS on STN
 87:84743 Synthesis of furan derivatives. **Synthesis of**
furanpolycarboxylic acid. Saikachi, Haruo; Kitagawa,
 Tokujiro (Fac. Pharm. Sci., Kobe Gakuin Univ., Kobe, Japan).
 Chemical & Pharmaceutical Bulletin, 25(4), 809-11 (English) 1977.
 CODEN: CPBTAL. ISSN: 0009-2363. OTHER SOURCES: CASREACT 87:84743.

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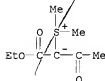


AB The furantricarboxylate I was prepd. by cyclocondensation of
 EtO2CC(COMe):SMe2 with MeO2CC.tplbond.CO2Me, presumably via the 1,3
 MeCO shift of the ylide MeCOC(S+Me2)(CO2Et)C(CO2Me):C-CO2Me to give
 Me2S+C(CO2Et):C(CO2Me)C(CO2Me):CMeO- and cyclization of the latter.

IT 7039-34-1
 (cyclocondensation of, with dimethyl acetylenedicarboxylate)

RN 7039-34-1 HCA

CN Sulfonium, dimethyl-, 1-(ethoxycarbonyl)-2-oxopropylide (9CI) (CA
 INDEX NAME)



CC 27-6 (Heterocyclic Compounds (One Hetero Atom))

IT 7039-34-1
 (cyclocondensation of, with dimethyl acetylenedicarboxylate)

L28 ANSWER 18 OF 20 HCA COPYRIGHT 2004 ACS on STN

- 78:123954 Synthetic aspects of carbene reactions. I. Reactions of alkoxy carbonyl carbenes with molecules bearing hetero atoms. Migita, Toshihiko; Ando, Wataru (Fac. Eng., Gunma Univ., Maebashi, Japan). Kenkyu Hokoku - Asahi Garasu Kogyo Gijutsu Shoreikai, 20, 317-33 (Japanese) 1972. CODEN: AGKGAA. ISSN: 0365-2599.
- AB Direct or benzophenone-sensitized photolysis and Cu salt-catalyzed decompn. of N2C(CO2Me)2 and N2CHCO2Et were studied in the presence of aliph. hetero compds. i.e. alkyl or allyl sulfides, ethers, halides, and alcs. The Cu salt-catalyzed reaction gave stable ylides and occurred selectively on the hetero atoms of substrates bearing both hetero atoms and ethylenic double bonds; photosensitization gave insertion and cycloaddn. products with high selectivities. Reaction of alkoxy carbonyl carbenes with allyl alcs. gave bicyclic lactones.
- IT 7039-28-3P
(prepn. of)
- RN 7039-28-3 HCA
- CN Sulfonium, dimethyl-, 1-acetyl-2-oxopropylide (9CI) (CA INDEX NAME)



CC	22-17 (Aliphatic Compounds)				
IT	1283-64-3P	5617-63-0P	7039-28-3P	13353-12-3P	
	13353-14-5P	13353-17-8P	15143-62-1P	15224-07-4P	16860-52-9P
	17870-68-7P	22874-89-1P	22874-92-6P	24171-94-6P	24171-95-7P
	24171-96-8P	24171-97-9P	24171-98-0P	24171-99-1P	24172-00-7P
	24172-01-8P	24172-02-9P	24212-88-2P	24308-25-6P	24420-55-1P
	24420-56-2P	24420-58-4P	24420-59-5P	24420-60-8P	24420-61-9P
	29119-67-3P	29119-68-4P	29123-96-4P	29123-97-5P	29123-98-6P
	29123-99-7P	29124-03-6P	29124-04-7P	29124-05-8P	32150-12-2P
	32150-13-3P	34281-98-6P	34281-99-7P	34282-00-3P	35589-61-8P
	35589-62-9P	35589-63-0P	35620-08-7P	35620-09-8P	35620-10-1P
	35620-12-3P	35620-14-5P	35621-67-1P	35621-69-3P	35621-70-6P
	35621-71-7P	35621-73-9P	38134-18-8P	40426-66-2P	40426-67-3P
	40426-68-4P	40426-69-5P	40426-70-8P	40426-75-3P	40426-76-4P
	40426-77-5P	40426-78-6P	40426-79-7P	40426-80-0P	40426-81-1P
	40426-82-2P	40426-83-3P	40426-84-4P	40426-85-5P	40426-87-7P
	40426-88-8P	40426-89-9P	40426-92-4P	40426-93-5P	40426-95-7P
	40426-96-8P	40426-97-9P	40426-98-0P	40426-99-1P	40427-00-7P
	40427-14-3P	40427-18-7P	40427-22-3P	40427-26-7P	40427-28-9P
	40513-77-7P	40864-40-2P			

(prepn. of)

IT 119-61-9, uses and miscellaneous
(sensitizer, for photolysis of diazoacetates
and diazomalones)

L28 ANSWER 19 OF 20 HCA COPYRIGHT 2004 ACS on STN

77:33724 Reactions of dimethyl diazomalone with divalent sulfides.
Ando, Wataru; Yagihara, Tomio; Tozune, Shigeru; Imai, Isamu; Suzuki,
Junji; Toyama, Tadao; Nakaido, Setuko; Migita, Toshihiko (Dep.
Chem., Gunma Univ., Kiryu, Japan). Journal of Organic Chemistry,
37(11), 1721-7 (English) 1972. CODEN: JOCEAH. ISSN: 0022-3263.
OTHER SOURCES: CASREACT 77:33724.

AB Bis(carbomethoxy)-carbene, generated photochem. from dimethyl
diazomalone, reacts with alkyl and aryl sulfides to form stable
sulfonium bis-(carbomethoxy)methylides. Reaction of the carbene
with alkyl disulfides forms alkylthiomalonate as the major product
instead of the sulfonium ylides. Triplet carbene, generated from
benzophenone photosensitized decompn. of the
diazomalone, also reacts with Me₂S to produce the sulfonium ylide.
This ylide formation involves the fast intersystem crossing from the
triplet to the singlet carbene in the presence of Me₂S. Copper salt
catalyzed thermal decompn. of diazomalone in alkyl or aryl
sulfides produces sulfonium ylides in high yields.

IT 7039-28-3P

(prepn. of)

RN 7039-28-3 HCA

CN Sulfonium, dimethyl-, 1-acetyl-2-oxopropylide (9CI) (CA INDEX NAME)



CC 22-4 (Physical Organic Chemistry)

IT	7039-28-3P	14070-66-7P	17870-68-7P	24308-25-6P	
	24420-52-8P	24420-53-9P	24420-55-1P	24420-56-2P	24420-57-3P
	24420-58-4P	24420-59-5P	24420-60-8P	24420-61-9P	24420-62-0P
	24420-63-1P	33781-29-2P	34281-98-6P	34281-99-7P	34282-00-3P
	34282-07-0P	34282-11-6P	34282-12-7P	34282-14-9P	34282-15-0P
	34282-16-1P	34282-18-3P	34282-19-4P	34282-20-7P	34297-79-5P

(prepn. of)

L28 ANSWER 20 OF 20 HCA COPYRIGHT 2004 ACS on STN

77:4699 Synthesis and acid-base and tautomeric

equilibriums of some onium derivatives of acetoacetic ester.
Kalnina, S.; Neilands, O. (Rizh. Politekh. Inst., Riga, USSR).
Latvijas PSR Zinatnu Akademijas Vestis, Kimijas Serija (1), 43-8
(Russian) 1972. CODEN: LZAKAM. ISSN: 0002-3248.

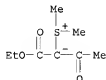
AB By refluxing the iodonium salt, $\text{MeCO}(\text{EtO}_2\text{C})\text{C-I}+\text{C}_6\text{H}_3\text{R}_2-3,4$ (I, R = H, Me), 2 min with quinoline, isoquinoline, or Me_2S in the presence of Cu acetylacetonate in C_6H_6 the corresponding inner salts of (1-carbethoxy-2-oxopropenyl)quinolinium (II), -isoquinolinium (III), and -dimethylsulfonium (IV) hydroxide were prep'd. in 70-94% yield. The salts easily absorbed moisture and formed hydrates. The protonated forms of II, III, IV, and V exist as tautomeric mixts. of cis-cis-enol and ketone. The equil. consts. (KT) in aq. media were detd. (compd. and KT in H_2O , 50, and 85% EtOH given): II, 0.79, 0.82, 1.0; III, 0.12, 0.20, 0.32; IV, 1.13, 1.32, 1.56; V, 0.76, 1.56, 1.78. The pK of the protonated compds. were also detd.

IT 7039-34-1P

(prepn. and tautomerism of)

RN 7039-34-1 HCA

CN Sulfonium, dimethyl-, 1-(ethoxycarbonyl)-2-oxopropylide (9CI) (CA INDEX NAME)



CC 22-8 (Physical Organic Chemistry)

IT 7039-34-1P 37070-74-9P 37070-75-0P
(prepn. and tautomerism of)

=> d 129 1-82 ti

L29 ANSWER 1 OF 82 HCA COPYRIGHT 2004 ACS on STN

TI A new reaction of sulfur ylides. Imination of dimethylsulfonium ketoylides with tosyl isocyanate

L29 ANSWER 2 OF 82 HCA COPYRIGHT 2004 ACS on STN

TI Sulfur ylides. 12. Optically active keto stabilized sulfur ylide obtained from L-proline: synthesis and study

L29 ANSWER 3 OF 82 HCA COPYRIGHT 2004 ACS on STN

TI Highly fluorinated sulfonium enolates

- L29 ANSWER 4 OF 82 HCA COPYRIGHT 2004 ACS on STN
TI 3-Unsubstituted 1,5-Diaryl-2,4-pentanediones and
-4-Methoxy-2-pentanones: Synthesis via Corresponding 3-Hydroxy
Ketones Generated from 2-Isoxazolines
- L29 ANSWER 5 OF 82 HCA COPYRIGHT 2004 ACS on STN
TI Structural and configurational isomerism of cations of O- and
C-sulfo derivatives of 1,3-keto enols. Unusual mechanism of
topomerization of cyclic sulfuranes
- L29 ANSWER 6 OF 82 HCA COPYRIGHT 2004 ACS on STN
TI Synthesis of 1,4-oxathiocines and thiopyrans by the reaction of
2-amino-4,5-dihydro-3-thiophenecarbonitriles with ethyl
diazoacetoacetate
- L29 ANSWER 7 OF 82 HCA COPYRIGHT 2004 ACS on STN
TI A general route to 3-unsubstituted 1,5-diaryl-2,4-pentanediones and
-4-methoxy-2-pentanones
- L29 ANSWER 8 OF 82 HCA COPYRIGHT 2004 ACS on STN
TI Chemistry and structure of thiophenium S,C-ylides
- L29 ANSWER 9 OF 82 HCA COPYRIGHT 2004 ACS on STN
TI Study of Anh's theory for α -thiolated cyclohexanones
- L29 ANSWER 10 OF 82 HCA COPYRIGHT 2004 ACS on STN
TI Reactions with betaines. XXV. The chemistry of betaines from
dihetero alkanes
- L29 ANSWER 11 OF 82 HCA COPYRIGHT 2004 ACS on STN
TI Sulfur ylides. 5. Reactions of phthalimido-containing
keto-stabilized sulfonium ylides
- L29 ANSWER 12 OF 82 HCA COPYRIGHT 2004 ACS on STN
TI Benzo[b]thiophenium sulfur-carbon ylides: preparation, structure and
comparison with thiophenium analog
- L29 ANSWER 13 OF 82 HCA COPYRIGHT 2004 ACS on STN
TI Crystal and molecular structures of two sulfonium ylides: the
influence of secondary sulfur-oxygen interactions on conformation
and packing of molecules
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